



Complete Summary

TITLE

Physician Consortium for Performance Improvement: Prenatal Testing Physician Performance Measurement Set

Brief Abstract

DESCRIPTION

The measure set is composed of clinical performance measures that indicate "whether or how often a process of care or outcome of care occurs."

RATIONALE

Prenatal testing was selected as a condition-specific measurement set because of the prevalence and incidence of pregnancy; neonatal mortality; prevalence of pregnancy-related complications; related health care costs; and the existence of established clinical recommendations for prenatal testing.

The effects of prenatal care are difficult to quantify. However, appropriate care can promote healthier pregnancies by detecting and managing maternal medical conditions that warrant intervention, identifying fetuses at risk for congenital anomalies, prematurity and still birth, and by providing health care advice to patients. Maternal medical risk factors have a major influence on pregnancy complications and infant survival. Some of the more serious conditions necessitate close medical supervision to prevent severe complications.

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Maternal:

- More than 6 million women become pregnant annually and give birth to more than 4 million live infants each year. Although the percentage of women who begin prenatal care in the first trimester has risen by 10 percent in the past decade to 82.8 percent for 1998, the proportion of mothers with late care or no prenatal care (3.9 percent) has remained unchanged since 1997.
- The incidence of pregnancy-related hypertension (37.6 per 1,000) has risen steadily over the past decade and rates for related hypertensive disorders, chronic hypertension, and eclampsia remain unchanged since 1990.
- Gestational diabetes (GDM) is the second most frequently reported complication of pregnancy, occurring in 3 to 5 percent of all pregnancies.

- Approximately 16,000 new cases of cervical cancer are diagnosed each year and about 4,800 women die from this disease annually.
- Thirteen to seventeen percent of pregnant women with untreated asymptomatic bacteriuria develop pyelonephritis, usually requiring hospitalization for treatment.
- HIV transmission from mother to child during pregnancy, labor, and delivery or by breastfeeding has accounted for 91 percent of all AIDS cases reported among U.S. children. In 1998, a total of 10,998 AIDS cases was reported among U.S. women and 382 cases were reported in children less than 13 years of age.

Infant:

- Although the U.S. infant mortality rate has decreased steadily since 1975 (to 7.2 per 1,000 live births in 1998), the United States continues to rank 22nd to 25th in the International Infant Mortality Rate Index, a rate significantly behind that of other major industrialized countries.
- Congenital anomalies (158.7 per 100,000 live births) are the leading cause of death among infants. Each year, about 4,000 U.S. infants are born with spina bifida and anencephalus and more than 1,600 infants are born with Down's syndrome.

ASSOCIATION WITH VULNERABLE POPULATIONS

Prenatal care and pregnancy related morbidity and mortality are uniquely associated with women and infants.

BURDEN OF ILLNESS

Maternal:

- The U.S. maternal mortality ratio in 1998 was 7.1 per 100,000 live births and this ratio has not significantly decreased since 1982.
- Complications of pregnancy-induced hypertension are a major cause of maternal deaths in the United States.
- Infants born to diabetic women are at increased risk of fetal malformation, prematurity, spontaneous abortion, macrosomia, and metabolic derangements. Gestational diabetes (GDM) is also associated with other neonatal complications such as hyperbilirubinemia and hypoglycemia. Macrosomia is associated with increased risk of operative delivery and birth trauma.
- Bacteriuria in pregnant women increases the risk for preterm delivery and low birthweight. Women with bacteriuria during pregnancy are usually heavily colonized resulting in an increased risk for perinatal transmission.

Infant:

- Infants born in multiple births are at greater risk than singletons for prematurity or low birthweight. In 1998, 41.7 percent of twins and 89.1 percent of triplets/+ were both preterm and low birthweight compared with 3.8 percent of singletons.

- The five leading causes of infant mortality in the United States are as follows: congenital anomalies, prematurity/low birthweight, sudden infant death syndrome, maternal pregnancy complications, and respiratory distress syndrome.

UTILIZATION

Low birthweight babies can require increased hospital and provider resources, including time in a neonatal intensive care unit (NICU). A severely ill newborn may spend several weeks or months in a NICU depending on the complexity of the health problem.

COSTS

Birth defects can cause great human suffering, as well as high medical and nonmedical costs for special education, rehabilitation, and other services. In 1992, the estimated lifetime costs for 18 of the most clinically significant birth defects in the United States were \$8 billion.

Analysis of the cost implications of low birthweight babies has revealed that:

- Low birthweight babies can require time in a neonatal intensive care unit (NICU) at a cost ranging from \$1,000 to \$2,500 per day.
- The lifetime medical costs for one premature baby are conservatively estimated at \$500,000.
- Low birthweight accounts for 10 percent of all health care costs for children.
- Health care, education, and child care from birth to age 15 years for the 3.5 to 4 million infants and children born with low birthweight cost between \$5.5 and \$6 billion more than for children born at normal birthweight.

Data Collection for the Measure

DESCRIPTION OF CASE FINDING

All patients who gave a birth during a 12-month period.

DENOMINATOR INCLUSIONS/EXCLUSIONS

NUMERATOR INCLUSIONS/EXCLUSIONS

PRE-EXISTING INSTRUMENT USED

Computation of the Measure

DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

PRESCRIPTIVE STANDARD

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

A demonstration project to test the validity and reliability of measures, as well as their usefulness to practicing physicians, are under way. The Arkansas Foundation for Medical Care (AFMC) is evaluating these prenatal testing measures.

EVIDENCE FOR RELIABILITY/VALIDITY TESTING

Flaherty TT. Clinical practice guidelines: physician performance measurement, and other clinical quality improvement activities. Chicago (IL): American Medical Association (AMA); 4 p.(Board of Trustees Report; no. 14-I-01).

Identifying Information

MEASURE COLLECTION

[The Physician Consortium for Performance Improvement Measurement Sets](#)

SUBMITTER

American Medical Association on behalf of the Physician Consortium for Performance Improvement

DEVELOPER

Physician Consortium for Performance Improvement

RELEASE DATE

2001 Apr

REVISION DATE

2002 Jan

MEASURE STATUS

This is the current release of the measure set. An update is not in progress at this time.

MEASURE AVAILABILITY

Electronic copies: A brief summary and the full text of the Prenatal Testing Core Physician Performance Measurement Set are also available at the American Medical Association's (AMA's) Division of Clinical Quality Improvement Web site: www.ama-assn.org/go/quality.

For additional information, contact the AMA at (312) 464-4908.

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